

REMARKS

In view of the following remarks and the foregoing amendments, reconsideration and allowance are respectfully requested.

Claims 21-23, 25, 42-64 and 68-70 are pending with claims 21, 47 and 56 being independent. Independent claims 21, 47 and 56 have been amended. The amendments find support in the application at Figures 17 A-D and the accompanying text. No new matter has been introduced.

35 U.S.C. 112 - Claims 21-23, 25, 42-64 and 68-70

Claims 21-23, 25, 42-64 and 68-70 stand rejected under 35 U.S.C. 112, first paragraph as allegedly failing to comply with the written description requirement for the features "wherein first lattice images in a direction parallel to said grain boundary in the first crystal are different from second lattice images in the direction parallel to said grain boundary in the second crystal." Claims 21-23, 25, 42-64 and 68-70 also stand rejected under 35 U.S.C. 112, second paragraph as allegedly being indefinite with respect to the features noted above. Independent claims 21, 47, and 56 have been amended to remove "wherein first lattice images in a direction parallel to said grain boundary in the first crystal are different from second lattice images in the direction parallel to said grain boundary in the second crystal" from the claims. These amendments are believed to fully address the rejections. Accordingly, applicant requests that these rejections be withdrawn.

35 U.S.C. 102(e) - Claims 21, 42, 43, 47, 51 and 52

Claims 21, 42, 43, 47, 51 and 52 have been rejected under 35 U.S.C. 102(e) as being unpatentable over Iwasaki (JP 08-288515 A) (with family member U.S. Patent No. 5,759,879 serving as a translation). Applicant requests reconsideration and withdrawal of this rejection because Iwasaki does not disclose or properly suggest all of the features of independent claims 21 and 47.

For example, independent claim 21, as amended, recites a personal computer that includes a semiconductor film having lattices continuously connected to each other at a grain boundary of the semiconductor film with **directions of the lattices being different from each other**.

Iwasaki discloses a method for forming a polycrystalline silicon film and a method for fabricating a thin-film transistor (Iwasaki: Abstract). The rejection asserts that Iwasaki discloses that different lattices are in the same direction parallel to the grain boundary, and refers to Fig. 3F, col. 12:17-18 for this disclosure. However, claim 21 recites that the “directions of said lattices are different from each other.” Applicant submits that Iwasaki does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in independent claim 21.

Similarly, independent claim 47 also recites that the “directions of said lattices are different from each other.” In accordance with the above, applicant submits that Iwasaki does not disclose or properly suggest at least this feature of independent claim 47, so that claim 47 is allowable for at least this reason.

Therefore, applicant submits that independent claims 21 and 47, along with their dependent claims 42-43 and 51-52, are allowable for at least the above reasons.

35 U.S.C. 103(a) - Claims 22 and 48

Claims 22 and 48, which depend from claims 21 and 47, have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Erhart (U.S. Patent No. 5,572,211). Applicant requests reconsideration and withdrawal of this rejection because Erhart does not remedy the failure of Iwasaki to describe or suggest all of the features of claims 21 and 47.

The rejection states that, because Iwasaki does not teach “the inclusion of TFTs in active matrix LCD displays for computers,” Erhart can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Erhart does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in the claims 21 and 47. Accordingly, neither Iwasaki, Erhart, nor any proper combination of the two, discloses or properly suggests at least

these features of independent claims 21 and 47, and claims 22 and 48 are allowable for at least this reason.

35 U.S.C. 103(a) - Claims 23, 25, 46, 49, 50 and 55

Claims 23, 25, 46, 49, 50 and 55 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of den Boer (U.S. Patent No. 5,539,219). Applicant requests reconsideration and withdrawal of this rejection because den Boer does not remedy the failure of Iwasaki to describe or suggest all of the features of claims 21 and 47.

The rejection states that, because Iwasaki does not teach “pixel electrode and opposite electrode, with liquid crystal provided therebetween,” den Boer can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that den Boer does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claims 21 and 47. Accordingly, neither Iwasaki, den Boer, nor any proper combination of the two, discloses or properly suggests at least these features of independent claims 21 and 47, and claims 23, 25, 46, 49, 50 and 55 are allowable for at least this reason.

35 U.S.C. 103(a) - Claims 44, 45, 53 and 54

Claims 44, 45, 53 and 54 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Kobayashi (U.S. Patent No. 3,925,803). Applicant requests reconsideration and withdrawal of this rejection because Kobayashi does not remedy the failure of Iwasaki to describe or suggest all of the features of claims 21 and 47.

The rejection states that, because Iwasaki does not teach “the source/channel/drain region to comprise, within the channel region, rod-shaped silicon crystals,” Kobayashi can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Kobayashi does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claims 21 and 47. Accordingly, neither Iwasaki, Kobayashi, nor any proper combination of the two, discloses or properly suggests at least these features of independent claims 21 and 47, and claims 44, 45, 53 and 54 are allowable for at least this reason.

35 U.S.C. 103(a) – Claims 56, 60 and 61

Claims 56, 60 and 61 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Inoue (U.S. Patent No. 6,153,893). Applicant requests reconsideration and withdrawal of the rejection because neither Iwasaki, Inoue, nor any proper combination of the two describes or suggests all of the features of claim 56. In particular, the references do not describe or suggest that the “directions of said lattices are different from each other,” as recited in claim 56.

The rejection states that, because Iwasaki does not teach “a low concentration impurity region provided between the channel formation region and at least one of the source region and the drain region,” Inoue can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Inoue does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claim 56. Accordingly, neither Iwasaki, Inoue, nor any proper combination of the two, discloses or properly suggests at least these features of independent claim 56, and claims 56, 60 and 61 are allowable for at least this reason.

35 U.S.C. 103(a) – Claim 57

Claim 57 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Inoue and Erhart. Applicant requests reconsideration and withdrawal of this rejection because Erhart does not remedy the failure of Iwasaki and Inoue to describe or suggest all of the features of claim 56.

The rejection states that, because Iwasaki does not teach “the including of TFTs in active matrix LCD displays for computers,” Inoue and Erhart can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Inoue and Erhart do not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claim 56. Accordingly, neither Iwasaki, Inoue, Erhart, nor any proper combination of the three, discloses or properly suggests at least these features of independent claim 56, and claim 57 is allowable for at least this reason.

35 U.S.C. 103(a) – Claims 58, 59 and 64

Claims 58, 59 and 64 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Inoue and den Boer. Applicant requests reconsideration and withdrawal of this rejection because den Boer does not remedy the failure of Iwasaki and Inoue to describe or suggest all of the features of claim 56.

The rejection states that because Iwasaki does not teach the “pixel electrode and opposite electrode, with liquid crystal provided therebetween,” Inoue and den Boer can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Inoue and den Boer do not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claim 56. Accordingly, neither Iwasaki, Inoue, den Boer, nor any proper combination of the three, discloses or properly suggests at least these features of independent claim 56, and claims 58, 59 and 64 are allowable for at least this reason.

35 U.S.C. 103(a) – Claims 62 and 63

Claims 62 and 63 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Inoue and Kobayashi. Applicant requests reconsideration and withdrawal of this rejection because Kobayashi does not remedy the failure of Iwasaki and Inoue to describe or suggest all of the features of claim 56.

The rejection states that, because Iwasaki does not teach the “the source/channel/drain region to comprise, within the channel region, rod-shaped silicon crystals,” Inoue and Kobayashi can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Inoue and Kobayashi do not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claim 56. Accordingly, neither Iwasaki, Inoue, Kobayashi, nor any proper combination of the three, discloses or properly suggests at least these features of independent claim 56, and claims 62 and 63 are allowable for at least this reason.

35 U.S.C. 103(a) – Claims 68-70

Claims 68-70, which depend from claims 21, 47, and 56, have been rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Tran (U.S. Patent No. 5,534,445). Applicant requests reconsideration and withdrawal of this rejection because Tran does not remedy the failure of Iwasaki to describe or suggest all of the features of claims 21, 47 and 56.

The rejection states that, because Iwasaki does not teach “select a silicon wafer for providing a substrate underneath the insulating layer on which the semiconductor film is grown,” Tran can be used in combination with Iwasaki to teach these features. However, even assuming for the sake of response that this assertion is correct, applicant submits that Tran does not disclose or properly suggest that the “directions of said lattices are different from each other,” as recited in claims 21, 47 and 56. Accordingly, neither Iwasaki, Tran, nor any proper combination of the two, discloses or properly suggests at least these features of independent claims 21, 47 and 56, and claims 68-70 are allowable for at least this reason.

Double Patenting – Claims 21, 44 and 45

Claims 21, 44 and 45 have been rejected for double patenting over claims 5-7 of U.S. Patent No. 6,380,560. Applicant submits that claims 21, 44, and 45 are patentable over claims 5-7 of the '560 patent. Claims that differ from each other (aside from minor differences in language, punctuation, etc.), whether or not the difference would have been obvious, are not considered to be drawn to the same invention for double patenting purposes under 35 U.S.C. 101. (MPEP 802.02). At least because independent claim 21 was amended as described above, claim 21 should not be subject to a double patenting rejection. For example, claims 5-7 of U.S. Patent No. 6,380,560 do not recite “wherein directions of said lattices are different from each other,” as in claim 21 of the instant application. Therefore, applicant submits that claims 21, 44 and 45 are allowable.

Conclusion


It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, objection, issue, or comment, including the Office Action's characterizations of the art, does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation. Applicant reserves the right to prosecute the rejected claims in further prosecution of this or related applications.

Fees in the amount of \$940 for a One-Month Extension of Time and a Request for Continued Examination are being paid concurrently herewith on the electronic filing system (EFS) by way of deposit account authorization.

Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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